

MULTICHANNEL ORTHOGONAL FREQUENCY DIVISION  
MULTIPLEXED RECEIVERS WITH ANTENNA SELECTION AND  
MAXIMUM-RATIO COMBINING AND ASSOCIATED METHODS

5

Abstract of the Disclosure

A reconfigurable multichannel receiver may selectively operate in increased throughput modes and/or increased range modes. In some embodiments, the receiver may select two or more antennas from a plurality of spatially diverse antennas to receive more than one subchannel of a wideband orthogonal frequency division multiplexed (OFDM) channel. Maximum-ratio combining may be performed on corresponding symbol-modulated subcarriers from the two or more antennas, and a single OFDM symbol may be generated from contributions from the subchannels received by the two or more antennas.

10

15 In other embodiments, more than one subchannel of a wideband OFDM channel may be received through a single antenna selected from a plurality of spatially diverse antennas. In other embodiments, a single subchannel may be received by a plurality of spatially diverse antennas and maximum-ratio combining may be performed on corresponding symbol-modulated subcarriers received by the

20 antennas.

"Express Mail" mailing label number: EV 332569233 US

Date of Deposit: December 29, 2003

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